

**Mini Tourist Train**  
**Manual**

**Tianjin Mickrod International Trade Co., Ltd.**

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## **Preface**

Thanks for your purchase for Mickrod Mini Tourist Train. The product is a combination of novel appearance, high quality and environmental friendly. The key parts are supplied by well known manufacturers. Paint specially for luxurious car is used, the frame is ever rust free . The product is light, pollution-free, low-sounded, conveniently charged, safe brake and competent for high degree climbing. The product wins good reputation on the advanced technology, reliable performance and favorable price.

To right use, develop best performance and prolong the life, pls carefully read the manual. Because of the possible improvement in the future, the product is subject to the technical document at that moment. "Warning" and "Notice" in the manual are used to express the importance of instruction. "Warning" instructions are involved in the driver safety and overlooking them possibly result in being injured. "Notice" instructions are the attentions for best performance and prolonging the life or emphasize other important instructions.

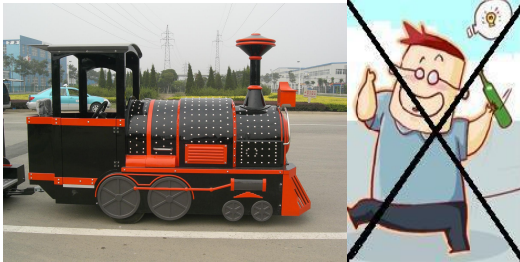
We believe this mini tourist train will attract more and more tourists and bring you more and more benefit.

Prohibit to copy the manual unless our written agreement for business purpose, if held in violation of legal liability.

## Driving Safely

### Notice

- 1 Pls carefully read the manual before operation.
- 2 Only authorized driver could drive the mini train.
- 3 Number of passengers couldn't exceed the limit.
- 4 Don't drive under the influence.

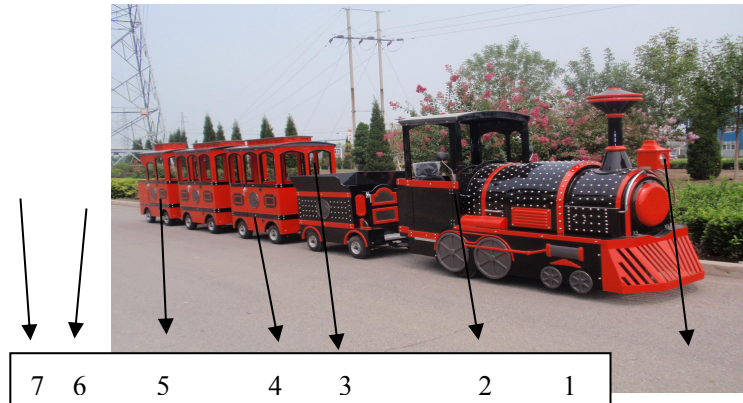


### When driving

- 1 Drive when after passengers sit down.
- 2 Keep your hands on the steering wheel and focused .
- 3 Be more careful when backward.
- 4 Pls avoid sudden start or sudden brake.
- 5 When driving at high speed, pls don't suddenly revolve the steering wheel.
- 6 When climbing up or down on the slope, pls drive straightly not obliquely, otherwise that will very possibly result in danger.
- 7 Pls strictly conform with the manual to operate the mini train.

# Struction and Parameter

## Structure



- |                         |  |                      |
|-------------------------|--|----------------------|
| 1、Head light            | 2、Body                                     | 3、Driver cab         |
| 4、Coal car              | 5、Coach No. 1                              | 6、Coach No. 2        |
| 7、Last coach            | 8、Power capacity meter (Electricity meter) |                      |
| 9、Working time meter    | 10、Steering wheel                          | 11、Ignation Switch   |
| 12、Brake pedal          | 13、Accelerator                             | 14、Turn light switch |
| 15、Head light switch    | 16 Alarm                                   | 17、Forward/Backward  |
| 18、Parking brake handle |  |                      |

## Parameter

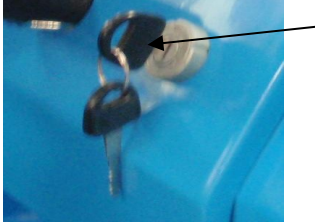
Type	ME-24		
Passenger capacity	24 kids OR 18 adults and kids		
Weight(not including battery)	Around 1800Kgs		
Dimension	10500*1160*1920 mm		
Max. speed	7Km/h	Brake distance	≤3. 5M
Turning Radius	≥2.7m		
Range(In theory)	90Km		
Tire of locomotive	4. 00-8	Tire of coach	4. 10/3. 50-6
Electric motor	DC traction motor XQ-3-3.1		
Battery	3D-250AH		
Controller	American CURTIS Electronic Control System		
Accelerator	Continuously Variable Transmission		
Charger	CZB3J		
Chassis	High-strength material shaped, metal welded frame		
Body	High-strength composite material		
Control panel	Ignition switch, electricity meter, turn light indicator		
Rear axle	Efficient gear transmission differential		
Brake system	Central hydraulic brake system		
Steering system	One-stage rack and pinion steering, automatic gap compensation, three-pivot steering structure		
Standard equipment	Rear view mirror, head light, turning light, brake light, brass bell and microphone		
Options	Protective net, leather seats, smoke generator		

## Operational Control

### 1 Start and stop the mini train

Start: Turn the ignition switch to the right and the main circuit will be connected.

Stop: Pls don't take down the key until the circuit is disconnected.



2 Remark: Before start, pls ensure the Forward/Backward button to stay in the middle  
Pls choose Forward “↑” or Backward “↓” as per your requirement.



### ⚠ WARNING!

Warning: Pls shift between Forward and Backward until the train comes to a complete stop.

Pls must ensure to shift between Forward and Backward **AFTER THE MINI TRAIN HAS COME TO A COMPLETE HALT** and pls first adjust to middle position and **AFTER TWO SECONDS** then choose "Forward" or "Backward". It is forbidden that hasty switch will result in main contactor burning or this control out of order.

### 3 Accelerator pedal



After starting the ignition switch, choose direction "Forward" or "Backward", pls loosen parking brake, put right foot on the accelerator pedal, **SPEED UP GRADUALLY. Thundering to speed up at the beginning is prohibited.**

### 4 Brake pedal



Put the right foot on the brake pedal and press to stop the train.

#### 5 Parking brake



Lift up parking brake handle to lock the mini train after the train stops.

Note: Ensure the Forward/Backward button in the middle. Then close the ignition switch and take down the key.

#### 6 Rocker Switch



#### 7 Power capacity meter (electricity meter)



It shows the capacity of electricity which is for reminding clients of timely charging. When full it will show accordingly. It needs to be charged when electricity capacity lower than 30%.

## Check before Driving

### **WARNING!**

Before checking, pls ensure the ignition key to be taken down to avoid accidental activating. Also lift up the parking brake handle to avoid unexpected moving.

#### **Checking items before every drive:**

Battery

Tire

Turning system

Pedal

Body and chassis

#### **Battery**

Pls charge timely.

The charging steps is as per ‘charging ‘

Pls check if the battery is balanced to avoid the damage due to shake. Also check if the battery electrolyte outflows. Ensure the poles are not corroded.

#### **Tire**

Pls check the pressure of tire before using the mini train

The max.. inflation pressure of locomotive tire: 7. 2BAR/105P. S. I.

The recommended. inflation pressure of locomotive tire: 5BAR

The max.. inflation pressure of coach tire: 3. 5BAR/50P. S. I.

The recommended. inflation pressure of coach tire: 2. 5BAR

#### **Tire wearied and teared**

Check the tire surface condition if there is crack and foreign matter. When the thick of tire pattern is less than 1 mm, pls replace the tire.

#### **Turning system**



Turn the steering wheel to check if there is idling away or some abnormal sound. If so, it should be some part with problem. In that case, pls contact with us.

#### **Pedal operation**

Brake pedal: Feel firm when step on it and it will reset when release

Accelerator pedal: Pls first ensure ignition switch is off then check if the accelerator pedal could be flexibly operated.

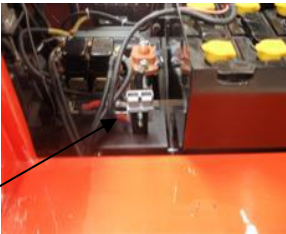
## Body and chassis

Pls check the body and chassis if there is some damage or some parts missing.

## Charging

### **WARNING!**

Pls read carefully this part and next part "charger" and operate as per these before charging  
The train should be stopped in the ventilated place when charging. Pls correctly connect the circuit and start the charger to charge.



### **WARNING!**

The battery is uncovered when charging to avoid explosion due to gas set.

Pls don't unplug the AC plug when charging because that possibly results in battery explosion.



Note: 1 Pls make sure to uncover the protecting cover of outlet before connect or disconnect power to avoid outlet damage due to forced unplugging.

2 When charging fully, the charger will automatically stop..

3 Then pls unplug from the train body.

4 Only use this special charger for this model.

## Charger

The detailed information is as per the appendix.

## Maintenance

### Maintenance of battery

1 Wash battery upper surface with Soda water to avoid being eroding.

Pls ensure cleanser free out of inner of battery when washing.

2 Pls check the liquid level before charging and after charging.

Before charging: When the liquid level is lower than the copper sheet,

Only distilled water is added until just covering the copper sheet.

After charging: The liquid level should be above 6-12mm above the copper sheet. If the liquid level is not enough, pls carefully add the distilled water. To prevent from the water boiling, you could add appropriate distilled water after charging.

3 Pls check the liquid density as per the chart:

F C INDICATION

120	48.9	1.244
110	43.3	1.248
100	37.8	1.252
90	32.2	1.256
80	26.7	1.260
70	21.1	1.264
60	15.6	1.268
50	10	1.272
40	4.4	1.276
30	-1.1	1.280

### WARNING!

The electrolysis of water is poisonous and corrosive, pls avoid your skin, eye and clothes contacting with it. The explosive gas is sent from battery and pls keep off the pilot fire. Charging is under the ventilative condition.

Keep kids off.

## Periodic maintenance chart

### 定期保养图表

为了达到最佳效果和安全操作，定期检查是必需的。

在保养前请确认关掉主开关和拉上驻车刹车。若你对此车不熟悉的话，由代理商或合格的技工负责。

For best effect and your safety, periodic check is necessary.

Pls ensure to close the ignition switch and lift up the parking handle. If you are not familiar with the train, pls assign qualified mechanic.

C=Check CA=Check and Adjust R=Replace S=Service or repair CL=Clear and Lubricate L=Lubricate

	Remark	Before operation	Every month 20 circles 20hours 100miles 160km	Half a year 125circles 125 hours 600miles 1000km	Every year 250 circle s 1200 miles 2000k m	Every 2 years 500circles 500hours 2500miles 4000km	Every 4 years 1000circles 1000hours 5000miles 8000km	Page
Before Operation	Charge	S	S	S	S	S	S	8-5
	Clean up around battery and check the tightness of screw	S	S	S	S	S	S	8-3/6-2
	Check the brake system	C	CA	CA	CA	CA	CA	8-9/8-10
	Check the steering system	C	C	C	C	C	C	6-3
	Check the tire pressure, pattern thickness and surface condition of tire	C	CA	CA	CA	CA	CA	6-2

	Check body and chassis	C	C	C	C	C	C	6-4
	Check the tightness of screw	C	C	C	C	C	C	*
Every month	Check the level of electrolyte		C	C	C	C	C	8-3/8-4
	Check if the contact point of battery is damaged		C	C	C	C	C	*
	Clean and lubricate the relevant parts of pedal system		CL					*
Every six months	Check insulated wire appearance			C	C	C	C	*
	Check if shock absorber leak oil and if spring is damaged			C	C	C	C	*
Every year	Discharge test				S	S	S	*
	Add pole protective agent				S	S	S	*
	Check the thickness of brake				C	C	C	*

	block and rear axle							
	Check direction clearance and adjust the wheel				CA	CA	CA	*
	Check the tightness of wheel screws and bearings of front wheel				C	C	C	8-9/*
	Check the level of gear oil in the gearbox and if leak or not				C	C	C	8-8
	Check and adjust brake system				CA	CA	CA	*
Every four years	Replace the gear oil in the gearbox						R	*
	Check if lubricant leaks, adjust gearbox if necessary						CA	8-8

## **Appendix CZB3J Auto-Charger**

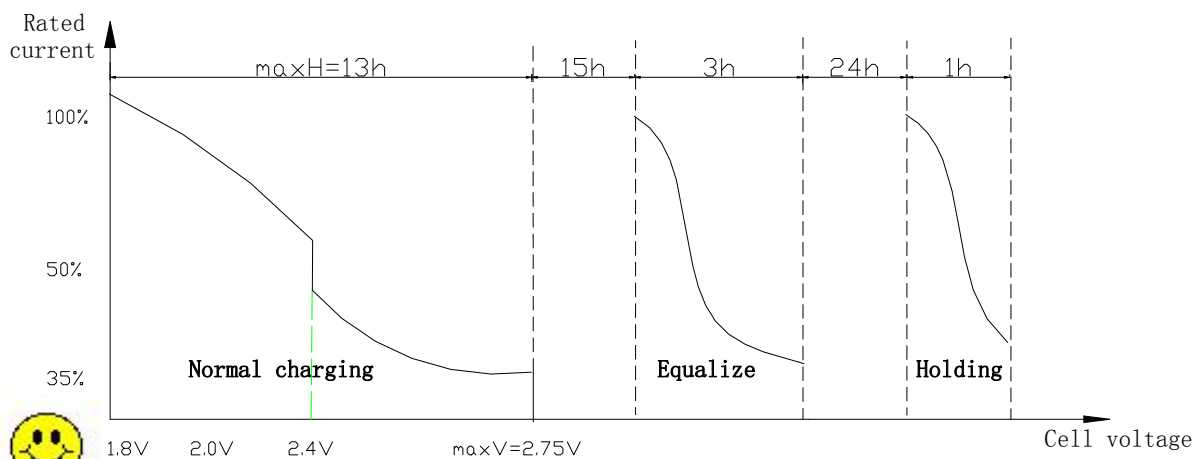
### **Operation Instruction**

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### Preview

CZB3J series auto-charger is a new style of practical charger with new outlook, strong functions and advanced technology. It adopts micro-processor chip technology with the feature of intelligent charging and simple operation. It is applied for the charging for battery on electric tray, fork , mover and all kinns of middle and small size electric cars and various kinds of start battery. The charging is taking on automatically according to program, auto-shuting after completion and free duty.



### 1. Main features

Item \ type	CZB3J-18A/12V	CZB3J-25A/12V	CZB3J-15A/24V	CZB3J-30A/24V	CZB3J-35A/24V	CZB3J-45A/24V	CZB3J-30A/36V
Input V、Hz	1Ph. 220~240V、50~60Hz						

- Adopting Wa curves for charging: the charging current reduces as the rising of battery voltage;
- With the function of auto-judging of completion according to charging time, quantity, voltage rising rate;
- High brightness LED to display all status of charging and fault warning;
- With the function of matching the battery and judging battery fault;
- With manual and auto charging styles;
- With the function of adjusting charging speed;
- With the function of auto-equalizing charging;
- With the function of holding the charging;
- With the function of time-delay starting;
- With the function of over heating protection;
- Pulling out the power plug during the process of charging, the charger shuts off automatically.




## 2. Normal working condition


- (1) Less than 2000 M above sea level;
- (2) Medium temperature:  $<+40^{\circ}\text{C}$  and  $>-10^{\circ}\text{C}$ ;
- (3) Relative humidity:  $< 85\%$  (when medium temperature at  $20^{\circ}\text{C} \pm 5^{\circ}\text{C}$ );
- (4) No electric conducting dust;
- (5) Environment without explosion danger;
- (6) No gas or steam of corroding metal or damaging insulation ;
- (7) No raid of snow or rain.



## 3. Main tech data

	KW	0.4	0.6	0.56	1.1	1.3	1.7	1.5
	A	1.9	2.7	2.5	5.1	5.9	7.6	6.9
Output	A	18	25	15	30	35	45	30
Rated	V	12	12	24	24	24	24	36
Charging time 9-12 Hr Battery Ah		100-150	160-200	80-130	190-250	200-300	300-400	190-250
Size	mm	160×200×300			160×200×300			
Net	kg	9.8			18	18	23	

#### 4. Notes & warning

	Type	CZB3J-35A/36V	CZB3J-30A/48V	CZB3J-35A/48V	CZB3J-45A/48V	CZB3J-30A/72V	
	Item						
Input	V Hz	1Ph. 220~240V、50~60Hz					
Input	KW	1.8	1.9	2.2	2.6	2.5	
Input	A	8	8.7	10	11.8	11.2	
Output	A	35	30	35	45	30	
Rated V		36	48	48	48	72	
Charging time:9-12 Hr Battery Ah		200-300	190-250	200-300	300-400	190-250	
Size	mm	240×260×350			280×310×430		
Net	kg	23	23	25	31	31	

#### Notes

- (1) This charger is applied for charging open liquid state type lead-acid battery.
- (2) Pay attention to the polarities of “+”、“-” *while connect* the output wires.
- (3) Please, do not prolong the length of output wires at will (generally, no more than 3 M), otherwise affecting the charging.
- (4) This charger should be installed in dry site with good ventilation, avoiding high temperature, dust and corroding gas.
- (5) Confirm that this charger’s rated input voltage is in line with the grid voltage.
- (6) To ensure normal operation, keep some space for the surrounding of this charger and be in good ventilation and check if the ventilation holes are blocked.



#### Warning

- 1、As the battery will emit small quantity of flammable gas during charging, so forbid any fire source in the surrounding!
- 2、Strictly forbid to block charger’ s ventilation holes!
- 3、Strictly forbid reversal connecting charging wires’ polarities of “+”、“-”, otherwise resulting breaking the output fuse inside the charger or tripping of the over-current switch, causing the stop of charging, even causing the damage of charger and injuring of human body!



**CZB3J BATTERY CHARGER**

## 5. Operating panel description

- 1—— Run lamp: Light, indicating the charger is in charging state.  
Flash, indicating the charger is in over-heating protection.
- 2—— Capacity lamp: Light, indicating the battery has been charged with 60%–70% of its capacity.
- 3——Completion lamp: Light, indicating having been completed and shut down.
- 4——Equalizing or holding lamp: Light, indicating in equalizing state;  
Flash, indicating in holding state.
- 5—— Fault lamp: Light, indicating battery disconnected;Flash, indicating battery unmatched or having fault.
- 6—— Charging speed selecting switch:  
Generally, please, set in the “M” position. Charging speed is related to the amount of charging current, the user can select according to the amount of battery’ s capacity and needed charging time.
- 7——Charging style selecting switch:  
There are auto and manual charging styles, the middle position of the switch is for stop state.  
Generally, please, to use auto-style. If the battery is seriously under-charged or aged, then select the manual-style. But, during the process of charging, watch the condition of battery carefully, and according the battery condition, shut down the charger manually.



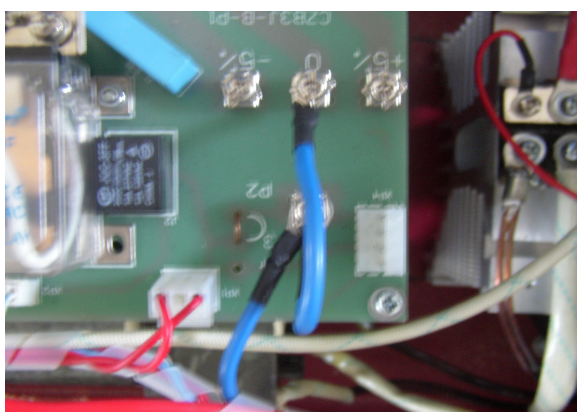
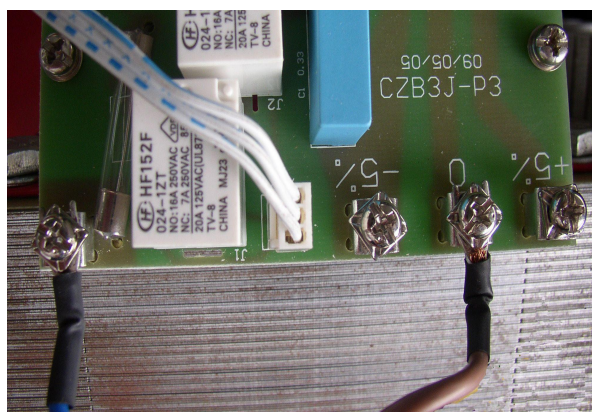
## 6. Operation Instruction

### 一、Operation

- Connect the charger with the battery’s charging plugs;

- Connect to grid power supply;
- Set the charging select switch (generally set in auto position)
- The charger executes 10 sec. time delay inspection, during which, the indicating lamp is flash; after that, the charger starts automatically; at the same time, run lamp is light;
- After completion, the charger shuts down automatically, the completion lamp is light;

**Note:** To make the charging more efficient, this charger has the function of input voltage adjusting. The user, according to the condition of the local grid, can adjust the power supply input lines' terminal. Generally, connect to the "0" terminal; if the grid voltage is higher, connect to "+5%" terminal, (remove the wire from "0" terminal and connect to "+5%" terminal) if the grid voltage is lower, connect to "-5%" terminal (remove the wire from "0" terminal and connect to "-5%" terminal); to best the charging effect! (Adjusting positions is on the PCB inside the charger, refer to following pictures. The left picture is for 160×200×300 & 240×260×350 size chargers and right picture is for 280×310×430 size).



## 二、 Auto-equalizing charging

After the completion and shutting down, if the battery is still kept connecting with the charger and grid power supply, then 15 hours later, entering into auto-equalizing charging; after completion of equalizing charging, auto-shutting down.

## 三、 Holding charging

After the completion of equalizing charging if the battery is still kept connecting with the charger and grid power supply, then 24 hours later, entering into auto-holding charging again, and so go on cyclically.



## 7. Inspection & maintenance

(Must be maintained by professional electric experts!)

	Fault	Cause_____ shooting
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1	lamp not light	◆No connecting to power____connect to power
2	Fault lamp is light	◆battery is disconnected____connect the battery correctly
3	Fault lamp is flash	◆battery is numatched or fault____replace with matched battery
4	Run lamp flash (charger is over-heating)	◆ Fan does not work____replace ◆ Grid over-voltage or ambient Temp. is high____adjust input to +5% term., or speed switch set to “L”
5	The battery is always under-charged	◆The grid is under-voltage____adjust input to -5% term.